

JAN 25 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

Work Order ID 155947

Wednesday, January 18, 2017 10:00:39 AM

155947

Page 2

Item ID: D412-673-011

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Electric Step Adaptation

Start Date: 1/18/2017 Start Qty: 2.00

2

Cust Item ID:

Required Date: 1/24/2017 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

Identify as per dwg & Stock Location: _____

0.00

130

Packaging

Memo

0.00

Packaging

Location: FG120

2x

DAS
27
9-89DAS
28
9-89

JAN 23 2017

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.03

Quality Control

DAS
27
9-89

JAN 24 2017

JAN 24 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					

Root Cause			FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	Past Due ☐							

Picklist Print

Wednesday, January 18, 2017 10:00:45 AM

Page 1

Work Order ID: 155947

155947

Parent Item: D412-673-011

D412-673-011

Parent Item Name: Electric Step Adaptation

Start Date: 1/18/2017

Required Date: 1/24/2017

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:B AS PER ECN 11-564 JLM 11-05-11 VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2913 *D2913* Doubler		Manufactured	No				Each	16.0000	1 2	2	DAS 6 9-89	JAN 10 2017	DAS 27 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				ST013				16					
					146234			16					
D3620-1 *D3620-1* Bushing		Manufactured	No				Each	0.0000	4 8	8	DAS 6 9-89	JAN 10 2017	DAS 27 9-89
ALS7-1032-130 *ALS7-1032-130* Rivnut	AELS8-1032-130	Purchased	No				Each	3,085.000	4 8	8	DAS 6 9-89	JAN 10 2017	DAS 27 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				FG				100					
					M128649			50					
					M136048			50					
				FP001				2655					
					M128649			155					
					M136579			2500					
				ST556				330					
					M136048			330					
AN6-53 *AN6-53* Bolt		Purchased	No				Each	10.0000	2 4	4	DAS 6 9-89	JAN 10 2017	DAS 27 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				ST332				10					
					m134891			10					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
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								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : _____							

Picklist Print

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Page 2

Work Order ID: 155947

155947

Parent Item: D412-673-011

D412-673-011

Parent Item Name: Electric Step Adaptation

Start Date: 1/18/2017

Required Date: 1/24/2017

Start Qty: 2.00

Required Qty: 2.00

AN310-6 Purchased No

Each 20.0000

2 4

AN310-6

Castellated Nut

DAS
28
9-89

Location

Loc Qty

Loc Code

ST331

20

122459

20

Each

1,300.000

6 12

NAS1149D0332J

Purchased

No

NAS1149D0332.J

Washer

Location

Loc Qty

Loc Code

FP001

92

m134848

92

GA

122

m134848

122

ST264

1086

m136015

1086

Each

881.0000

4 8

NAS1149D0663J

Purchased

No

NAS1149D0663.J

Washer

Location

Loc Qty

Loc Code

ST260a

600

M136192

600

ST263

281

M135948

281

DAS
28
9-89

DAS
6
9-89

JAN 10 2017

DAS
27
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
Root Cause				FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

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Work Order ID: 155947

155947

Parent Item: D412-673-011

D412-673-011

Parent Item Name: Electric Step Adaptation

Start Date: 1/18/2017

Required Date: 1/24/2017

Start Qty: 2.00

Required Qty: 2.00

MS21042L3

Purchased

No

Each

1,900.000

4

MS21042L3

Nut

**

DAS
6
9-89

JAN 10 2017

DAS
27
9-89

Location

Loc Qty

Loc Code

FP001

100

m135945

100

GA

162

m134360

108

m135135

54

OVER007

500

M136554

500

ST303

1138

M136044

38

M136192

600

M136406

500

4

MS24665-300

Purchased

No

Each

93.0000

4

MS24665-300

COTTER PIN

**

DAS
6
9-89

JAN 10 2017

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

28

118234

28

ST288

65

m135046

65

4

MS24693-S272

Purchased

No

Each

32.0000

4

MS24693-S272

SCREW

**

DAS
6
9-89

JAN 10 2017

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

32

M135046

32

4

DAS
28
9-89

DAS
28
9-89

DAS
28
9-89

Wednesday, January 18, 2017 10:00:45 AM

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
☐ Environment	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
☐ Design	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
☐ Doc/Data	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
☐ Equip/Tooling	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
☐ Handling/Pre	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
☐ Material	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
☐ Internal Transport	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
☐ Tribal Knowledge	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish		
☐ LOA	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
☐ Substation	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
☐ Past Expiry Date	☐ Manufacturing Process	☐ OTHER : _____					
☐ Misidentified	☐ Past Due						

Picklist Print

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Page 4

Work Order ID: 155947

155947

Parent Item: D412-673-011

D412-673-011

Parent Item Name: Electric Step Adaptation

Start Date: 1/18/2017

Required Date: 1/24/2017

Start Qty: 2.00

Required Qty: 2.00

MS27039-1-08

Purchased

No

Each

377.0000

2 4

MS27039-1-08

Screw

**

DAS
6
9-89

JAN 10 2017

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

FP001

274

m136047

274

GA

89

m128636

89

ST281

14

m135864

14

4 4

MS27039-1-11

Purchased

No

Each

111.0000

2 4

MS27039-1-11

Screw

**

DAS
6
9-89

JAN 10 2017

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

8

9662

8

ST280

103

m134738

3

m135978

100

3 1

MS35489-35

Purchased

No

Each

15.0000

2 4

MS35489-35

Grommet

**

DAS
6
9-89

JAN 10 2017

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST269

15

m127306

15

4 2

DT8393-1

Manufactured

No

Each

0.0000

**

DT8393-1

Tool (Drill Jig)

DT8393-3

Manufactured

No

Each

0.0000

**

DT8393-3

Tool (Drill Jig)

Wednesday, January 18, 2017 10:00:45 AM

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date ☐	☐	Manufacturing Process	☐	OTHER : _____			
Misidentified ☐	☐	Past Due	☐				

Picklist Print

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Work Order ID: 155947

155947

Parent Item: D412-673-011

D412-673-011

Parent Item Name: Electric Step Adaptation

Start Date: 1/18/2017

Required Date: 1/24/2017

Start Qty: 2.00

Required Qty: 2.00

DT8393-2 Manufactured No

Each 0.0000 1 2

DT8393-2

Tool (Drill Jig)

D4398-1 Manufactured No

Each 4.0000 4 8

D4398-1

Bushing

Location

Loc Qty

Loc Code

ST095

4

114056

4

DAS
28
9-89

JAN 20 2017

DAS
6
9-89

DAS
27
9-89

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Shop Packet Print

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D412-673 REV. C

REF CANADIAN STC: SH96-88

REF FAA STC: SR00563NY

REF EASA STC: EASA.IM.R.S.01303

PURPOSE:

THE PURPOSE OF THIS SERVICE INSTRUCTION IS TO ADD 4X D4398-1 BUSHINGS TO THE D412-673-011 ELECTRIC STEP ADAPTATION KIT, TO ENSURE COMPATABILITY WITH THE OEM ELECTRIC STEP.

PARTS LIST CHANGE:

QTY. -011	PART NUMBER	DESCRIPTION
X	D412-673-011	Electric Step Adaptation Kit

4	D4398-1	Bushing	ADD
---	---------	---------	-----

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 15947

JAN 18 2017

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: 
D. SHEPHERD (DE # 02)

DATE: 11.05.03
CERT. NO.: SH96-88
ISSUE NO.: 3

A	NEW ISSUE	AJS	11.05.03
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9556	SHEET 1 OF 2
APPROVED		TITLE	SCALE
DE APPR.		BUSHING INSTALLATION	NTS
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MODIFICATION PROCEDURE:

IT IS ACCEPTABLE TO PRESS OUT THE QTY 4 BUSHINGS LOCATED IN THE STEP ARMS (PART No. BHT 212-030-309-001 ARM OR BHT 212-030-310-001 ARM). REPLACE THE OEM BUSHINGS WITH QTY 4 D4398-1 BUSHINGS. ENSURE THAT THE SHOULDER OF THE BUSHING IS FACING OUT AS SHOWN IN FIGURE 1. AT THE INSTALLER'S DISCRETION, THE D4398-1 BUSHING MAY BE INSTALLED USING LOCTITE 601 (OR EQUIVALENT TO MIL-R-46082) APPLIED TO ALL MATING SURFACES. IN THIS CONFIGURATION, THE D4398-1 BUSHINGS REPLACE THE AN960JD616 WASHERS.

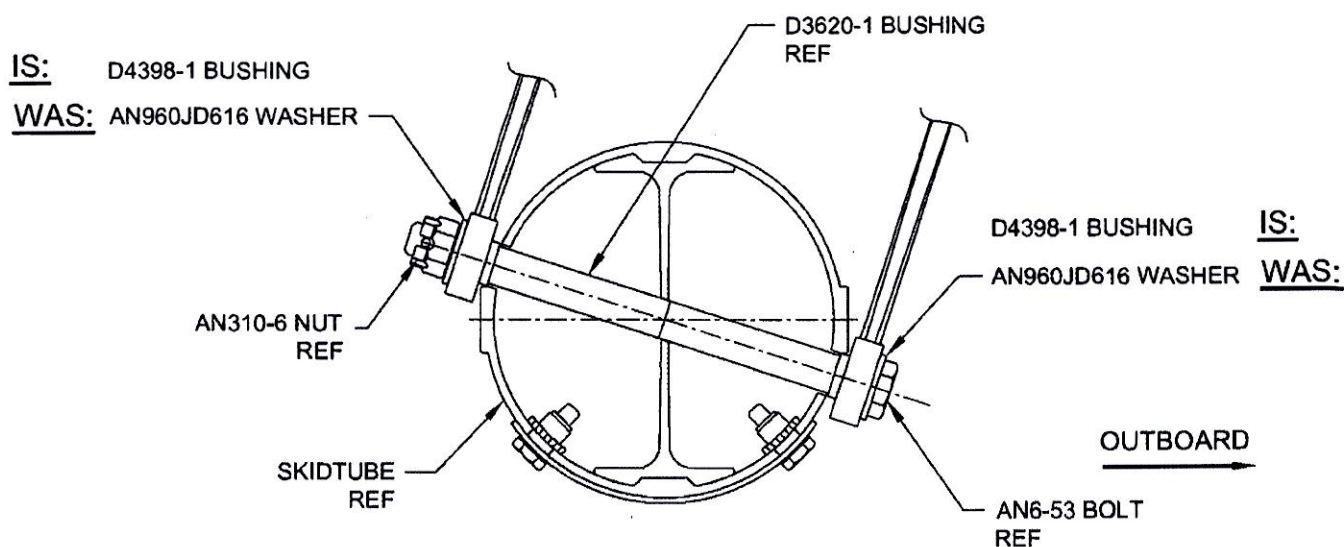


FIGURE 1: TYPICAL STEP INSTALLATION

CANADA
DEPARTMENT OF TRANSPORT
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Work Order ID 155947

Friday, January 20, 2017 10:04:01 AM

155947

Page 1

Item ID: D412-673-011

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Electric Step Adaptation

Start Date: 1/18/2017 Start Qty: 2.00

2

Cust Item ID:

Required Date: 1/24/2017 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: Date:

Tooling: Date:

Run Start ***NR1***

QC: Date:

SPC (Y/N): Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

DSI 9556

A

100

0.00

100

DC

Memo

0.00

Doc.Control -USB or Paperwork

PHOTOCOPY BLUE FILE AND PRINT LABELS AS PER PPP D412-673-011
CHG 003

DAS
21
9-89

JAN 20 2017

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

120

QC3- Inspect Part Finish

0.00

120

QC

Memo

0.00

Quality Control



REFERENCE ONLY

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D412-673 REV. C

REF CANADIAN STC: SH96-88

REF FAA STC: SR00563NY

REF EASA STC: EASA.IM.R.S.01303

PURPOSE:

THE PURPOSE OF THIS SERVICE INSTRUCTION IS TO ADD 4X D4398-1 BUSHINGS TO THE D412-673-011 ELECTRIC STEP ADAPTATION KIT, TO ENSURE COMPATABILITY WITH THE OEM ELECTRIC STEP.

PARTS LIST CHANGE:

QTY. -011	PART NUMBER	DESCRIPTION
X	D412-673-011	Electric Step Adaptation Kit

4	D4398-1	Bushing	— ADD
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5.0 WEIGHT AND BALANCE

The weight added to the Skidtube by the D412-673-011 Electric Step Adaptation Kit is negligible.

6.0 PARTS LISTS

Qty -011	Part Number	Description
X	D412-673-011	Electric Step Adaptation Kit
1	D2913	Doubler
4	D3620-1	Bushing
4	ALS7-1032-130	Insert
2	AN6-53	Bolt (or AN6C53)
2	AN310-6	Castellated Nut (or AN310C6)
6	AN960JD10L	Washer
4	AN960JD616	Washer (or AN960C616)
2	MS21042L3	Nut
2	MS24665-300	Cotter Pin (or AN380C3-3)
2	MS24693S272	Screw
2	MS27039-1-08	Screw
2	MS27039-1-11	Screw
2	MS35489-35	Grommet
1*	DT8393-1	Tool
1*	DT8393-2	Tool
2*	DT8393-3	Pin

* Tools listed for reference only. Do not install.